

Barker College Green Travel Plan

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Barker College Green Travel Plan

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APPENDICES

A. TRAVEL ACCESS GUIDE



1 Introduction

1.1 Background

This report supports a State Significant Development Application (SSDA) for the expansion and redevelopment of Barker College, which is to be submitted to the Department of Planning, Industry and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (the Act). EPM Projects is the proponent of the SSDA.

The Transport Planning Partnership (TTPP) has been appointed to prepare this Green Travel Plan (GTP) to respond to the Secretary's Environmental Assessment Requirements (SEARs) dated 15 December 2021 for the following item:

measures to promote sustainable travel choices for employees, students and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and highquality end-of-trip facilities, and implementing a Green Travel Plan

The GTP has been prepared to propose initiatives and measures that can be implemented to encourage green travel modes. This GTP is envisaged to primarily target school staff, students and parents.



1.2 The Role of Travel Plans

The purpose of a green travel plan relating to an educational facility is to encapsulate a strategy for managing travel demand that embraces the principles of sustainable transport whilst recognising the unique context of travel planning at education facilities. In its simplest form, this GTP encourages travel to and from the school using transport modes that have low environmental impacts, for example active transport modes including walking, cycling, public transport, and encourages better management of car use.

Active transport presents a number of interrelated benefits including:

- improved health benefits for the education workforce and student body
- reduced traffic congestion, noise and air pollution caused by cars
- greater social connections with communities
- cost savings to the economy and individual.

In order to ensure that the GTP meets its intended objectives, 'best practice' guidelines have informed the review including the City of Sydney 'Guide to Travel Plans' and 'The Essential Guide to Travel Planning' prepared by the United Kingdom Department of Transport.

From the above review, the key themes applicable to the GTP include:

- Site audit and data collection: Review of existing transport conditions, traffic surveys and travel questionnaire survey have been undertaken. This has assisted the review to identify and document the existing issues and opportunities relevant to the site and its accessibility, particularly by non-car modes. Opportunities to improve amenity, incentivise non-car travel and remove barriers to the use of sustainable transport modes are then dealt with under the Site-Specific Measures, detailed in Section 5.1.
- Audit of Policies: An audit of key policy documents has been undertaken to assist define the direction and purpose of the GTP, aligned with the key targets and objectives from a local and regional perspective.
- Bicycle Parking and Car Parking Management: This GTP provides a strategy for management of both bicycle parking and car parking moving forward, and how they interact with travel choices.
- Local Alliances: The development of relationships between the school and various stakeholders (such as Hornsby Shire Council and Transport for NSW) will assist the school in delivering improved transport options.

The school generates a large number of trips from various modes from staff, students and parents. Managing that travel demand in favour of sustainable modes is recognised as challenging but would be critical when considering the future redevelopment of the site.



1.3 Travel Plan Pyramid

The GTP will need to be tailored to the school to ensure appropriate measures are in place for the different users of the site (e.g. students, staff, parents, community and visitors) to promote a modal shift away from car usage.

The key elements of the GTP are shown in the Travel Plan Pyramid in Figure 1.1.



Figure 1.1: Travel Plan Pyramid

Figure 1.1 demonstrates that the key foundations to ensure the success of a GTP are:

- Location i.e. proximity to existing public transport services and proximity to residential developments, such that walking or cycling becomes the natural choice
- Built Environment i.e. provision of high-quality pedestrian and cycling facilities, end-oftrip facilities and limited car parking provision to encourage sustainable transport choices.

1.4 Drivers of the Travel Plan

There are a number of social, environmental and economic drivers for developing and implementing a GTP for developments as detailed below.



1.4.1 Car Parking

Car parks utilise valuable land resources and impact amenity. If the area continues to grow and there is no modal shift towards non-car transport modes, the car parking demand could increase significantly. As such, the provision of car parking must reflect the site's proximity to public transport to influence a modal shift to sustainable transport modes. Furthermore, the cost to provide parking is significant and therefore, there are strong economic imperatives to reduce car parking demand by incentivising non-car travel modes.

1.4.2 Environmental Impacts

The transport sector (road, rail, air and ship) is Australia's third largest source of greenhouse gas emissions (GHG), accounting for 18 per cent of emissions in Australia in 2015 (Climate Council of Australia, 2016). Mitigating this impact is a key driver of the GTP. Within Australia, the transport sector has the highest rate of growth of GHG emissions per year having risen by 51 per cent since 1990 with private vehicles responsible for almost half of transport emissions. In comparison, travel modes such as walking and cycling have the lowest emissions while public transportation has significantly lower impact than private vehicles.

1.4.3 Health Benefits

The use of sustainable transport modes can have wide-ranging health benefits due to a corresponding reduction in greenhouse gas emissions and increase in physical activity from walking and cycling. The shift from private cars to sustainable transport "can yield much greater immediate health "co-benefits" than improving fuel and vehicle efficiencies" (World Health Organisation, 2011). The potential benefits can include reduced respiratory diseases from better air quality, prevention of heart disease, some cancers, type 2 diabetes and some obesity-related risks.

1.4.4 Social Equity

Transport has a fundamental role in supporting social equity, that is the equitable distribution of services, amenities, and opportunities. The provision of sustainable transport modes can provide a more affordable alternative to car use. As such, it offers better mobility for women, children, young people, the aged, persons with disabilities and the poor, who have less access to private vehicles, thereby enhancing social equity.

1.4.5 Staff and Student Attraction

Ease of access has a significant impact on choices of work and study. Negative experiences and costs associated with travel can reduce the competitiveness of an



education facility. High quality and efficient transport systems are key to attracting and retaining staff and students. Support for active transport modes is also highly desired by employers and employees because it improves health and productivity.

1.4.6 Education and Leadership

Educational facilities would have a great number of new persons coming through the organisation each year and as such, the organisation would have a unique opportunity to educate students and staff into sustainable travel behaviours. These travel behaviours can help shape long-term travel behaviours that extend long after their completion at the organisation. Successful travel planning and education can reduce traffic impacts on the road network while potentially supporting a positive influence on local areas by raising public transport service demand and improving amenity.

1.5 Transport Objectives

The following objectives have been identified in order to achieve the vision of the GTP:

Objective 1: Facilitate a modal shift towards more sustainable transport modes

- Improve access, safety, amenity and convenience of sustainable transport modes for travel to/from the school.
- Incentivise sustainable transport modes and establish a culture of active and public transport use.
- Limit convenience of car access and parking within the campus.

Objective 2: Make the school a great place to study, work and visit

- Improve access and mobility within the campus to key attractions and public transport hubs and enhance the sense of place.
- Reduce the need to travel by promoting flexible learning and teaching environments.

Objective 3: Minimise the impact of travel on the built form of the school

- Prioritise infrastructure/facility allocation and priority decisions towards more sustainable transport modes (e.g. walking and cycling).
- Facilitate more efficient use of existing assets, such as parking management/policies and guidance.



2 Existing Transport Policy Context

The review of existing relevant policy clearly demonstrates a number of themes that should inform the approach to ongoing management of transport demand, and investment in the transport network. These themes include:

- provision of high-quality local transport infrastructure and improved bike paths and networks and improving accessibility and connectivity
- address car parking issues in key locations, including residential and business districts and encouraging active transport
- create connected, liveable communities where people can walk, cycle and use public transport to promote healthier, active communities.

A summary of the existing policy framework documents is provided in Table 2.1.



| Policy/Strategy | Key Aims/Objectives/Goals |
|---|---|
| Hornsby Shire Council | |
| Walking and Cycling Strategy, 2020 | The Draft Walking and Cycling Strategy has been prepared to provide a framework for Council to increase participation in walking and cycling, prioritise its delivery and improve the supporting infrastructure and resourcing for these activities in the Local Government area over the next 10 years. It covers the urbanised areas for walking and cycling. |
| NSW State Government | |
| New South Wales Long Term Transport Masterplan (NSW State Government, 2012) | The NSW Long Term Transport Masterplan guide the NSW Government's transport funding priorities over the next 20 years. As part of this Plan, short- and medium-term actions will focus on a more efficient and reliable bus network to be better integrated with the wider public transport system. |
| Future Transport Strategy 2056 | The Strategy aims to increase the mode share of public transport services and reduce the use of single occupant vehicles. The proposal will look to reduce private vehicle travel and aligning with the objectives of the Strategy. |
| Greater Sydney Region Plan: A Metropolis of Three Cities – Connecting People | The Greater Sydney Region Plan aims to deliver a 30-minute city where jobs, services and quality public transport spaces in easy reach of people's home. The site is well located to contribute towards creating a 30-minute city. The close proximity of the site to public transport facilities, as well as residential areas, means that students and staff can easily access the site via public transport modes or walking. The site thus aligns with the objects of the Plan in creating jobs near public transport, including education precincts, to contribute towards a 30-minute city. |
| Sydney's Cycling Future, Cycling for Everyday Transport (NSW State Government, 2013) | Sydney's Cycling Future has targeted the 70% of residents in NSW who have indicated that they would cycle if it were safer to do so. Based on this, improving cycling infrastructure is a key focus of the strategy. The Three Pillars of Sydney's Cycling Future include: investing in separated cycleways providing connected bicycle networks to major centres and transport interchanges |
| | promoting better use of our existing network; and, engaging with our partners across government, councils, developers and bicycle users. |

Table 2.1: Summary of Policy Framework

2.1 Summary of Existing Transport Context

2.1.1 Existing Public Transport Context

The site is generally serviced by bus services operated by Sydney Buses. The nearest railway station is Waitara Station which is located approximately 450m east of the site.

There are bus stops located on Pacific Highway, Yardley Avenue, College Crescent, Neutral Road and Pretoria Parade, within in a 400m radius from the school.

Table 2.2 and Table 2.3 indicate the public and school transport services, associated frequencies, and closest bus stop locations.



| Transport Type | Route | Closest Location | Frequency |
|-------------------|---|---|--|
| Turvia | T1 (North Shore & Western Line) | Waitara Station | AM peak (every 5-10mins) PM Peak (every 5-10mins) |
| Irain | T9 (North Shore to Hornsby via City) | Waitara Station | AM peak (every 15 mins) PM Peak (every 10-20 mins) |
| | 587 (Hornsby to Westleigh (Loop Service)) | Barker Oval, College Crescent | AM Peak (every 20-40mins) PM Peak (every 30-40mins) |
| Dura | 588 (Hornsby to Normanhurst West (Loop Service)) | Pretoria Parade before Pacific Highway | AM Peak (every 15-50mins) PM Peak (every 15-30mins mins) |
| BUS | 589 (Sydney Adventist Hospital to Hornsby) | Barker College, Pacific Highway | AM Peak (every 60 mins) PM Peak (every 60 mins) |
| | 600 (Hornsby to Parramatta) | Pacific Highway at James Street | AM Peak (every 10-20 mins) PM Peak (every 10 mins mins) |

Table 2.2: Existing Public Train and Bus Service and Associated Frequencies

Table 2.3: Existing School Bus Services and Associated Frequencies

| Transport Type | Route | Closest Location | Frequency |
|-------------------|--|---|---------------------|
| | 3002 (Castle Towers to Pacific Highway opposite Edgeworth David Avenue) | Barker College, Pacific Highway | AM peak (1 service) |
| | 3190 (Berowra Station to Northholm Grammar School) | Pacific Highway at James Street | AM peak (1 service) |
| | 3620 (Northholm Grammar to Berowra Station) | Barker College, Pacific Highway | PM peak (1 service) |
| | 8024 (Barker College Junior School to Thornleigh West PS via Pennant Hills) | Barker Oval, College Crescent | AM peak (1 service) |
| | 8067 (Hornsby Station to Normanhurst PS) | Pacific Highway at James Street | AM peak (1 service) |
| Bus | 8108 (Prestoria Parade after Fuller Avenue, Hornsby to Turramurra HS) | Neutral Road at Hall Road | AM peak (1 service) |
| | 8112 (Barker College Junior School to Turramurra School HS) | Barker Oval at College Crescent | AM peak (1 service) |
| | 9024 (Normanhurst PS to Pennant Hills Station via Thornleigh & Waitara) | Yardley Avenue at Pacific Highway | PM peak (1 service) |
| | 9085 (Warrawee PS to Westleigh via Hornsby) | Barker College at Pacific Highway | PM peak (1 service) |
| | 9087 (Mount St Benedict College to Hornsby Station via Westleigh) | Pretoria Parade before Pacific Highway | PM peak (1 service) |
| | 9093 (Normanhurst PS to Hornsby Station) | Pretoria Parade before Pacific Highway | PM peak (1 service) |
| | 9108 (Turramurra HS to Pretoria Parade before Pacific Highway, Hornsby) | Pretoria Parade before Pacific Highway | PM peak (1 service) |

Figure 2.1 presents a map of the key existing bus stops within a 400m radius of the site.





Figure 2.1: Transport Services within Close Proximity of the Site

Basemap: ArcGis (accessed 18/02/2021)

2.2 Pedestrian Infrastructure

Well established pedestrian facilities are provided within the immediate vicinity of the site. Sealed pedestrian footpaths are provided along the site frontage, with dedicated pedestrian facilities provided along Pacific Highway, Unwin Road, College Crescent and Clarke Road. In the form of signalised crossings, refuge islands or pedestrian (zebra) crossings. At present, these pedestrian facilities are well utilised during school peak drop-off and pick-up times.

The existing pedestrian facilities surrounding the site are shown in Figure 2.2.



Figure 2.2: Existing Pedestrian Facilities



Basemap: Nearmap (accessed 18/02/2021)

2.3 Cyclist Infrastructure

The cycle routes surrounding the site is shown in Figure 2.3. Notably, there is an off-road cycle route along College Crescent and Yardley Avenue.







Source: Cycleway Finder (accessed 3/03/2021)

2.4 Existing Car Share Facilities

Car share schemes are a flexible, cost effective alternative to car ownership and is a convenient and reliable way for staff or students to use a car when they need one. A number of car share companies operate in Australia, with numerous companies and vehicles positioned currently within the North Sydney area.

Car share is a concept by which members join a car ownership club, choose a rate plan and pay an annual fee. The fees cover fuel, insurance, maintenance and cleaning. The vehicles are mostly sedans, but also include SUVs and station wagons. Each vehicle has a home location, referred to as a "pod", either in a parking lot or on a street, typically in a highly populated urban neighbourhood. Members reserve a car by web or telephone and use a key card to access the vehicle.

Notably, the City of Sydney Council has reported that "a single car share vehicle can replace up to 12 private vehicles that would otherwise compete for local parking". As such, the provision of car sharing facilities or the promotion of using existing car sharing facilities in the vicinity should be able to reduce both the parking demand for the site and the traffic generated by it.



Figure 2.4 shows the location of the existing car share vehicles surrounding the site.





Source: https://www.goget.com.au/ (accessed 17/02/2021)



3 Existing Travel Patterns and Mode Splits

An online questionnaire was distributed to school staff and staff in March 2021 to determine their travel mode choice and behaviour. The key objective of the data collection was to understand travel behaviour of students and staff.

The ratio of completed surveys in relation to the student and staff population is shown in Table 3.1. The sample size obtained is considered adequate for this study.

| Group | Existing Population | Total Number of Surveys Completed | Ratio of Completion |
|---|------------------------|--------------------------------------|------------------------|
| Barker College Primary School Students (Kindergarten to Year 2) | 161 | 93 | 58% |
| Barker College Primary School Students (Year 3 to Year 6) | 475 | 232 | 49% |
| Barker College High School Students (Year 7 to Year 12) | 1956 | 856 | 44% |
| Staff | 506 | 276 | 55% |

Table 3.1: Survey Response Rates

3.1 Existing Travel Mode Splits

A summary of existing staff and student travel modes obtained from the survey results is provided in Table 3.2.



| | Arrival (AM) | | | | Departure (PM) | | | |
|------------------|--|---|----------------------------|-------|--|---|----------------------------|-------|
| Mode | Primary School Students (K-2) | Primary School Students (Y3-6) | High School Students | Staff | Primary School Students (K-2) | Primary School Students (Y3-6) | High School Students | Staff |
| Car | 74% | 58% | 26% | 92% | 87% | 49% | 16% | 92% |
| Walk | 6% | 3% | 3% | 4% | 11% | 4% | 4% | 4% |
| Bus | 16% | 13% | 15% | 1% | 0% | 13% | 16% | 1% |
| Train | 3% | 19% | 41% | 2% | 2% | 27% | 44% | 2% |
| Train and Bus | 0% | 7% | 15% | 0% | 0% | 7% | 20% | 0% |
| Cycle | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 1% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Table 3.2: Summary of Existing Staff and Student Travel Modes

The results indicate a high dependency on car usage for staff (91%) and K-2 primary students (74%-87%). There is approximately an even split between students travelling by car and students travelling by public transport/walking. Most high school students travel to/from school by public transport/walking (74%-84%).

Additionally, no students bicycle to/from school and only 1% of staff travel to/from school using a bicycle.

3.2 Staff Feedback

As part of the online questionnaire survey, staff who travelled to site by car were asked if they drive the car themselves, travelled with other school staff or are dropped off by someone who is not a staff member. The data indicated that the majority of staff travel by car drive to the site by themselves, with no passengers (91%). No staff drive or carpool to the site with another staff member.

Staff were also asked if they would consider alternative form of transport. The following feedback was received:

- 42% of the staff respondents would consider catching public transport to work if a school bus is provided to nearby suburbs and train stations
- 33% of the staff respondents would be willing to carpool with other staff
- 61% of the staff respondents would consider alternative form of transport, even occasionally



A summary of some of the key features that staff would like to see more to encourage walking, cycling public transport and carpool is presented in Figure 3.1 to Figure 3.3.



Figure 3.1: Measures to Encourage Walking/Cycling – Staff Responses

Figure 3.2: Measures to Encourage Public Transport Use – Staff Responses







Figure 3.3: Measures to Encourage Carpooling – Staff Responses

3.3 Student Feedback

The following feedback are received from the student surveys:

- 62% of primary school students have a sibling that goes to the school.
- 43% of high school students in years 7-12 have a sibling that goes to the school.
- 60% of primary school students in years K-6 who get dropped off/picked up travelled in a car with other Barker students.
- 37% of high school students in years 7-12 who get dropped off/ picked up travelled in a car with other Barker students.
- 51% of primary school students are not interested in changing their travel choices.
- 55% of high school students are not interested in changing their travel choices.

Students were also asked what would encourage them to use alternate mode of transport. A summary of some of the key features that students would like to see more to encourage walking, cycling and public transport and carpool is presented in Figure 3.4 and Figure 3.5.





Figure 3.4: Measures to Encourage Walking/Cycling/Public Transport Use – Student Responses

Figure 3.5: Measures to Encourage Carpooling – Student Responses



3.4 Other Key Findings

Other key findings from the survey questionnaire are as follows:

- The top five locations (LGA) which staff travel from/to the site are as follows:
 - Thornleigh
 - Hornsby



- Turramurra
- Normanhurst
- Mount Colah
- The top five locations (suburb) which students travel from/to the site are as follows:
 - Wahroonga
 - Turramurra
 - Pymble
 - Hornsby
 - St lves

Taking the above into consideration, TTPP notes the following salient points from the survey:

- Providing better and safer walking and cycling routes to school could encourage staff to switch travel mode to active transport.
- Staff are willing to carpool if they know the driver personally and if they can get help with finding people to carpool with.
- Students are willing to carpool if they could travel with friends or someone that they
 know. This means increased education and promotion of carpooling within students
 and parents need to be carried out to incentivise carpooling. There may need to be
 considerations for the School coordinating carpooling of parents with students for child
 protection reasons.
- Employees at Barker College are under a Code of Conduct and travelling with students alone and unauthorised is a breach.
- Increasing the frequency of bus services, particularly during the school peak period, to
 provide reliable and dedicated bus services to/from the school could encourage staff
 and students to use public transport. This however would need to be discussed with
 TfNSW.

The findings of this survey questionnaire have been used as a basis to develop the sitespecific measures to encourage a modal shift away from private vehicles. This is further detailed in Section 5.



4 Mode Share Targets

The aim of the GTP is to encourage a safe modal shift away from private vehicles by implementing measures that influence the travel patterns of staff and students. To ensure that the GTP is having the desired effect, the implementation of the GTP would be regularly monitored. The success of the GTP is measured by setting modal share targets and identifying the measures and actions that have the greatest impact.

The results of the existing staff and student modal splits indicate that car mode share (including drop offs) is generally as follows:

- Staff: 91%
- Primary school students: 63%
- Secondary school students: 26%.

It is noted that a modal shift of up to 5 per cent is typically considered to be a significant achievement (based on knowledge of local and international GTPs, and as stated by experts in Land Environment Court proceedings).

4.1 Proposed Mode Share Targets

On this basis, a summary of the existing and projected modal splits for each user type is provided in Table 4.1 and Table 4.2. In our view, these proposed modal split targets are considered safe, realistic and potentially high impact. Based on our review, survey and previous experience with similar initiatives at a School level, achieving these targets would meet the Transport Objectives in 1.5 and align closely with best practice guidelines of the City of Sydney 'Guide to Travel Plans' and 'The Essential Guide to Travel Planning' prepared by the United Kingdom Department of Transport.



| | Exis | ting Modal Splits | i | Proposed Modal Splits | | | |
|---|------------------------------|-----------------------------------|-------|------------------------------|-----------------------------------|-------|--|
| Travel Mode | Junior Students (K-Y6) | Secondary Students (Y7- 12) | Staff | Junior Students (K-Y6) | Secondary Students (Y7- 12) | Staff | |
| Dropped off/Picked up by car (only passenger) | 22% | 11% | 1% | 19% | 8% | 1% | |
| Dropped off/Picked up by car (with other students/staff) | 36% | 13% | 0% | 34% | 11% | 0% | |
| Car driver | 0% | 2% | 91% | 0% | 2% | 86% | |
| Carpool (with other students/staff) | 5% | 1% | 0% | 5% | 1% | 0% | |
| Walk Only | 4% | 3% | 4% | 4% | 3% | 4% | |
| Public Bus | 2% | 7% | 1% | 2% | 7% | 3% | |
| School Bus | 12% | 8% | 0% | 13% | 9% | 0% | |
| Train | 15% | 41% | 2% | 17% | 43% | 4% | |
| Train and Bus | 5% | 15% | 0% | 6% | 16% | 0% | |
| Cycle/ Scooter/ Skateboard | 0% | 0% | 1% | 1% | 1% | 2% | |
| Motorcycle | 0% | 0% | 0% | 0% | 0% | 0% | |
| TOTAL | 100% | 100% | 100% | 100% | 100% | 100% | |

Table 4.1: Existing and Projected Modal Splits – AM Arrivals



| | Exis | ting Modal Splits | 5 | Proposed Modal Splits | | | |
|---|------------------------------|-------------------------------|------------------------------|------------------------------|-----------------------------------|-------|--|
| Travel Mode | Junior Students (K-Y6) | Junior Students (K- Y6) | Junior Students (K-Y6) | Junior Students (K-Y6) | Secondary Students (Y7- 12) | Staff | |
| Dropped off/Picked up by car (only passenger) | 23% | 8% | 1% | 20% | 5% | 1% | |
| Dropped off/Picked up by car (with other students/staff) | 31% | 6% | 0% | 29% | 4% | 0% | |
| Car driver | 1% | 2% | 91% | 1% | 2% | 86% | |
| Carpool (with other students/staff) | 4% | 1% | 0% | 4% | 1% | 0% | |
| Walk Only | 6% | 4% | 4% | 6% | 4% | 4% | |
| Public Bus | 2% | 9% | 1% | 2% | 9% | 3% | |
| School Bus | 7% | 7% | 0% | 8% | 8% | 0% | |
| Train | 20% | 44% | 2% | 22% | 46% | 4% | |
| Train and Bus | 5% | 20% | 0% | 6% | 21% | 0% | |
| Cycle/ Scooter/ Skateboard | 0% | 0% | 1% | 1% | 1% | 2% | |
| Motorcycle | 0% | 0% | 0% | 0% | 0% | 0% | |
| TOTAL | 100% | 100% | 100% | 100% | 100% | 100% | |

Table 4.2: Existing and Projected Modal Splits – PM Departures

4.2 Case Study – Brisbane Active School Travel Programme

In 2004, Brisbane City Council implemented an Active School Travel (AST) programme at various schools to implement a number of initiatives to reduce the number of car trips made to and from Brisbane Schools.

Based on this programme, a summary of the key successes between 2008 and 2009 are as follows:

- 24.8 per cent decrease in car trips
- 19.1 per cent increase in students walking to the school
- 3.1 per cent increase in students cycling to school
- 2.5 per cent increase in students carpooling with other families.

The key initiatives implemented include:

 Walking Wheeling Wednesday – a weekly campaign to encourage students to actively travel to school every Wednesday. This enabled a 'spill over' effect where students chose to actively travel to school for the whole week.



- Park and Stride encourage students who have no alternative but to be driven to school to walk part of the way. A site was selected within a 5-10 minutes walking distance from the school and parents were encouraged to drop their children off there. This assisted to alleviate congestion experienced around the school gates.
- Walking School Bus group of children walking to and/or from school with trained and approved Walk Leaders from the school community. This walking route include key bus stop to pick up and drop off children along the route as required.
- Car Pooling encourage families to reduce the number of car trips from one family to provide some time and cost saving benefits by not having to do the 'school run' every day.
- RACQ 'Streets Ahead; Road Safety Program' RACQ officers would visit schools to teach students how to be safe pedestrians and passengers. This presentation is interactive and engaging to encourage children to practice correct road safety behaviours, making it easier for them to learn how to be safe road users in real-life situations.
- Public Transport Orientation this is an activity to educate students how to use buses safely and how to behave safely at bus stops. This motivated some parents to allow their children to use public transport to school.
- Bike Skills Training offered to students to improve their cycling competency, cycling confidence, safely cross the road, understand road rules and demonstrate to their parents they have attained sufficient skills to allow them to cycle to/from the school.
- Bike Cage Construction provision of secure bike storage areas to alleviate student's and parent's fear of bicycle theft and/or vandalism.
- Active Travel Maps specific active travel maps for each school to detail public transport services in the area, cycle and walking routes.
- Road Star and Assembly Presentations a mascot who appears at launch events and school assemblies to promote active travel.
- Adopt a Cop an initiative to pair a school up with their own police officer. This was
 found to provide reassurance to parents to allow their child to actively travel.
- Active School Travel (AST) E-News a monthly newsletter to detail best practice models for initiatives and publishes the Walking Wheeling Wednesday statistics allowing schools to compare results and achievements.
- Legacy Program provide schools with an additional two years of support in further developing and maintaining their travel plan.

A comprehensive evaluation was undertaken at the end of each year which highlights both successes and areas for improvement.

The above successful initiatives have been considered as part of this GTP.



5 Methods of Encouraging Modal Shift

To achieve the objectives of the GTP, measures will be put in place to influence the travel patterns to/from the site, with a view to encouraging modal shift away from cars.

5.1 Site-specific Measures

Table 5.1: Site Specific Measures

| ltem | | Description of Measure | | |
|------|---|---|--|--|
| 1. | Limited on-site car parking provision | Reducing, scheduling or limiting on-site car parking provision and introducing strict car parking policies to manage car parking allocation with the site. It is recommended that the number of staff allocated parking spaces be reduced to remove the "convenience" away from car travel, which was identified as one of the main reasons for driving to the site. | | |
| 2. | Designated carpool only spaces in centrally managed car parks | It is recommended that designated carpool only parking spaces be provided within the site to encourage carpooling within the campus. In order to use the designated carpool only spaces, a pre-booking system will be required. Security will be required to patrol these spaces to ensure appropriate use and compliance with relevant car park policies. | | |
| 3. | Bicycle Parking | It is recommended that additional secure bicycle parking facilities within the campus, particularly near buildings and change rooms be provided to accommodate the future population. Bicycle parking locations will need to be posted on public transport noticeboards and/or the school website to ensure staff, students and visitors are aware of the existing cycling facilities. The bike parking demand is to be regularly monitored (e.g. once a month). The parking demand data is to be analysed as part of the regular GTP updates, and additional parking is to be provided, as required, with an aim to provide a 20% float in the parking supply above the parking demand. | | |
| 4. | Walking Groups / Walking School Bus | Staff will be encouraged to walk by implementing a '10,000 steps per day initiative'. This involves providing staff with trackers that measure the number of steps they have walked. Staff members who have achieved the 10,000-step goal over a set period could be rewarded with a free gym membership or similar. Similar program is also recommended for students where students who achieved 10,000 steps in three consecutive days for example. A trained and approved Walk Leader from the school community should be employed to walk a group of children to and/or from school. This walking route should include key bus stop to pick up and drop off children along the route as required. | | |
| 5. | Bicycle User Groups | A cycling group should be established to familiarise themselves with the nearby bicycle routes and allow people to enjoy cycling with the company of others. This will also teach beginner cyclists the necessary skills required whilst cycling on-road. It will be necessary that a staff member be appointed to oversee and organise all bicycle events and communication regularly to promote cycling. | | |
| 6. | Public Transport User Groups | The school can organise a buddy system between senior students and junior students to travel via bus or train together. This would increase safety on public transport and parents would be more confident in letting their children to travel by trains or buses. | | |
| 7. | Public Transport Noticeboards | Public transport noticeboards should be provided at key locations and on the school's website to make staff, students and visitors more aware of the | | |



| Item | Description of Measure | | |
|---|--|--|--|
| | alternative transport options available. The format of the noticeboards will be based upon the travel access guide (see Appendix A). | | |
| 8. Provision of showers, changing rooms and lockers | End of trip facilities such as lockers and shower facilities should be provided to staff and students to encourage more staff and students to walk and cycle to the school. Identify any dedicated staff common areas to encourage this type of arrival to support access and readiness for teaching and other professional roles. The locations of the end-of-trip facilities should be included as part of the travel access guide posted at key locations on noticeboards, distributed via email regularly etc. This will enable staff and students to store their teaching material/resources in a safe and secure location. | | |
| 9. Public Transport Incentives/Discounts | Eligibility details for public and private transport concessions, bus services and other public transport information should be posted on school noticeboards/ website and will be emailed to students. | | |
| 10. Online carpooling forum | A carpooling forum should be developed on the school staff and student portal to encourage students and staff to travel in groups. The forum should provide a platform for people travelling on the same route to site to find each other and form groups. Existence of the forum should be advertised at information points/ noticeboards within the school, social media and/or on the Transport Access Guide (TAG). In addition to this, social events should go hand in hand with this approach to promote social interaction between the staff or parents to reduce social barriers which may deter them from carpooling with others. | | |
| Provide well-lit and safe pedestrian and cyclist facilities within the campus | It is recommended for all internal pedestrian and cycle facilities within the school be reviewed and upgraded with better lighting and with more security patrol (e.g. cctv) to encourage more staff and students to walk/cycle to the site. In addition, it is recommended for a liaison officer to be appointed to lobby Council and other government agencies to improve existing and/or | | |
| | and pedestrian paths to and from the site. | | |
| 12. Road Safety Awareness presentations | It is recommended that regular presentations be held during school assemblies to promote active travel and generate interest and excitement amongst the staff and students. This presentation should also help students to understand the road rules, as well as teach them how to be safe road users in real-life situations. | | |
| 13. Park and Stride Programme | It is recommended that the school consider implementing a Park and Stride programme to encourage parents to drive their children to an off- site location and walk to the school to alleviate traffic congestion on surrounding residential streets. This measure would need to be formally appraised to ensure it is safe, designated and is not impacting residential or business quiet enjoyment. | | |
| 14. Learn to Ride Programme | It is recommended that the school organise Learn to Ride programme to offer lessons for students in learning how to ride a bicycle in a safe and responsible manner. It will be a fun and interactive learning experience for students to develop their riding skills, knowledge and confidence. | | |
| 15. School Mobile App | It is recommended to develop or use a mobile application which can be used as a platform to communicate with parents and students regarding changes in travel plans and conditions. The school could utilise 'SkoolBag' app which is Australia's leading school communication app. An extension to the mobile app could include an instant messaging service for parents to facilitate quick trip-planning, real-time communication and real-time public transport information. | | |



5.2 Off-site measures

The school will consult with Hornsby Council and/or TfNSW with a view to implementing several off-site measures to improve the transport connections to and from site including:

- improved cycling and pedestrian facilities between the school and Hornsby Station and Waitara Station.
- provision of additional car share facilities within the site surrounds
- discussions with TfNSW to provide additional school bus services and more frequent services to/from the campus, particularly during the school peak period.

5.3 Transport Access Guide

The information provided within the GTP will be provided to students and staff in the form of a package of easy-to-understand travel information known as a Transport Access Guide (TAG).

TAGs provide customised travel information for people travelling to and from a particular site using sustainable forms of transport – walking, cycling and public transport. It provides a simple quick visual look at a location making it easy to see the relationship of site to train stations, wharfs, bus stops and walking and cycling routes.

Such TAGs encourage the use of non-vehicle mode of transport and can reduce associated greenhouse gas emissions and traffic congestion while improving health through active transport choices.

They can take many forms from a map printed on the back of business cards or brochures. Best practice suggests that the information should be as concise, simple and site centred as possible and where possible provided on a single side/sheet. If instructions are too complex, people are likely to ignore them.

This TAG is to be available for pick up at various locations within the campus such as, at front entrances and noticeboards.

A draft TAG has been prepared for the site and is provided in Appendix A.

5.4 Information and Communication

Several opportunities exist to provide students and staff with information about nearby transport options. Connecting students and staff with information will help to facilitate journey planning and increase their awareness of convenient and inexpensive transport options which support change in travel behaviour.



Transport NSW info

 Bus, train and ferry routes, timetables and journey planning are provided by Transport for New South Wales through their Transport Info website:

http://www.transportnsw.info/

Cycleway Finder

 The Roads and Maritime Services provides a map with detailed cycling route information to encourage people of all levels of experience to travel by bicycle:

http://www.rms.nsw.gov.au/maps/cycleway_finder

SkoolBag

 The 'Skoolbag' mobile app could be adopted which will provide more easily accessible information to students and parents. An extension to the mobile app could include an instant messaging service for parents to facilitate quick trip-planning and real-time communication.

Similarly, phone apps such as TripView display Sydney public transport timetable data and shows a summary view showing current and subsequent services, as well as a full timetable viewer. This timetable data is stored on mobile devices, so it can be used remotely.

Connecting students and staff via social media may provide a platform to informally pilot new programs or create travel-buddy networks and communication.

The above web links and any social media platforms are to be included within the GTP/TAG.

5.5 Actions

A summary of the key strategy and framework action table is shown in Table 5.2. It should be noted that this framework action table will be updated as required. However, it is stressed that the availability of the suggested strategies from Day 1 on the term and/or during staff induction procedures is a key factor in influencing travel patterns.

Table 5.2: Framework Action Table

| Strategy/Action | Objective | Responsibility | Timescale |
|--|-----------|----------------|------------|
| Limited on-site car parking | 1, 3 | School | Completion |
| Introduce designated carpool only spaces | 1 | School | Completion |
| Review car parking policy and limit car parking allowances | 1, 3 | School | Annually |
| Advocate existing car sharing facilities nearest the school | 1, 2 | School / TPC | Ongoing |
| Provide additional public car sharing facilities | 3 | Council | Ongoing |
| Establish a carpooling online forum for staff and students to register and establish social/"meet and greet" events to promote social interaction and carpooling | 1, 2 | TPC | Ongoing |



| Strategy/Action | Objective | Responsibility | Timescale |
|--|-----------|------------------|------------|
| Provide showers, changing rooms, drying rooms and lockers within the site which are easily accessible and near buildings/classes | 1, 2, 3 | School | Completion |
| Provide secure bicycle parking | 1, 2, 3 | School | Completion |
| Regularly monitor the bicycle parking demand | 1, 2, 3 | School/ TPC | Ongoing |
| Establish Walking Groups / Walking School Bus and Bicycle User Groups with associated online forums | 1, 2, 3 | TPC | Ongoing |
| Provide public transport noticeboard at key locations within the site in the form of a travel access guide. This will also be posted on the school's website and included as part of all student enrolments and during staff induction. | 1, 2 | School / TPC | Ongoing |
| Provide well-lit and safe pedestrian and cyclist facilities within the campus | 1, 2, 3 | School / Council | Ongoing |
| Provide well-lit and safe pedestrian and cyclist facilities on all pedestrian and cyclist routes to and from the site | 1, 2, 3 | Council / TfNSW | Completion |
| Establish monthly Road Safety Awareness presentations | 1, 2 | School / TPC | Ongoing |
| Park and Stride Programme | 1, 2 | School / TPC | Ongoing |
| Learn to Ride Programme | 1, 2, 3 | School / TPC | Ongoing |
| Development/Use of Mobile App | 1, 2, 3 | School / TPC | Ongoing |
| Ongoing review of the GTP to introduce additional measures as required | 1, 2, 3 | TPC | Ongoing |



6 Management and Monitoring of the Plan

6.1 Management

There is no standard methodology for the implementation and management of a GTP however the GTP will be monitored to ensure that it is achieving the desired benefits. The mode share targets set out in Section 4 are used in this regard to ensure there is an overall goal in the management of the GTP.

The monitoring of the GTP will require annual travel questionnaire surveys to be undertaken with a focus to establish travel patterns including mode share of trips to and from the site. These surveys should be undertaken every year for the first three years post occupation.

The implementation of the GTP will need a formal Travel Plan Co-ordinator (TPC), who will have responsibility for developing, implementing and monitoring the GTP. The TPC will be an appointed staff member or an independent expert.

It will also be necessary to provide feedback to students and staff to ensure that they can see the benefits of sustainable transport.

There are several keys to the development and implementation of a successful GTP. These include:

- Communication Good communication are an essential part of the GTP. It will be necessary to explain the reason for adopting the plan, promote the benefits available and provide information about the alternatives to driving alone.
- Commitment GTPs involve changing established habits or providing the motivation for people to choose a travel mode other than relying on private vehicles. To achieve cooperation, it is essential to promote positively the wider objectives and benefits of the plan. This commitment includes the provision of the necessary resources to implement the plan, beginning with the introduction of the 'carrots' or incentives for changing travel modes from Day 1 of staff induction/student enrolment.
- Consensus It will be necessary to obtain broad support for the introduction of the plan from the staff and students.

Once the plan has been adopted, it is essential to maintain interest in the scheme. Each new initiative in the plan will need to be publicised and marketing of the project as a whole will be important.



6.2 Remedial Actions

A continuous review will take place to identify remedial actions should the modal share targets not be achieved. At this stage, the following measures are proposed both as discrete measures and those being proposed as part of the redevelopment of the site:

- increased bicycle parking
- increased/ improved changing facilities/lockers
- improve pedestrian paths/ wayfinding signage within the site
- increase use of car share.

6.3 Green Travel Plan Working Party

It is recommended that a committee known as the Green Travel Plan working party be set up to implement programs and initiatives within the school to promote increased use of public transport services and car-pooling opportunities. Such a working party may include staff and student representatives and active community/council representatives who could contribute to the process.

6.4 Consultation

The results of the GTP will be communicated with students, staff and to the wider community via the school website and/or noticeboards and newsletters.

As such, it is recommended that a summary letter is produced presenting the results of the survey every year for the first three years post occupation. This letter/report can be appended to the GTP.

Communication to students, staff and wider community may be carried out in a similar form by public display of the GTP on the school website and/or noticeboards. Alternatively, a news article on the matter could be included on the website and/or noticeboards and newsletters.



7 Conclusion

It is recommended that travel surveys be conducted each year for a period of three years after completion, to highlight both successes and areas for improvement.

The findings of these surveys should be reported every year after the recommended green travel initiatives have been adopted to measure the effectiveness of these measures. This GTP would need to be updated accordingly to reflect the findings of the updated travel surveys.

If required, additional measures may be required to achieve the modal split targets and to achieve the long-term aspiration of reduced car use.



Appendix A

Travel Access Guide





Public/School Bus Services

Bus Stops are located on Pacific Highway, Pretoria Parade, College Crescent, Yardley Avenue and Neutral Road within a 400m radius of Barker College. These stops are serviced by:

- Public Bus Services: 587, 588, 589, 600
- School Bus Services: 3002, 3190, 3620, 8024, 8067, 8108, 8112, 9024, 9085, 9087, 9093, 9108

For more information on public and school bus services, visit:

https://transportnsw.info/travel-info/ways-to-getaround/bus#/

Private Bus Services

Barker College provides the following dedicated bus services:

- Northern Beaches Route
- Bayview Route
- Narrabeen Route
- Terry Hills Route
- Lower North Shore Route
- Northbridge Route
- Balgowlah Route
- Arcadia Route

For more information on Barker College bus routes and timetables, visit: https://www.barker.college/enrolments/getti

ng-to-barker



Drop-off/ Pick-up

Drop-off and pick-up activities will take place on school grounds, with access provided off College Crescent.



Cycling

Visit

https://www.hornsby.nsw.gov.au/lifestyle/s ports-and-recreation/biking/road-cycling to download the city's cycling route map.

Train

Waitara Station is located 550m south-east (7-minute walk) from the site. It is serviced by T1 (North Shore & Western Line) and the T9 (Northern Line).

Plan your trip using

- Sydney's Trip Planning Tool at https://transportnsw.info/
- Google directions at
 <u>http://maps.google.com.au/directions</u>
- The mobile app, Trip View, which provides live train and bus timetables

Walking Journey Times: 7 minutes to Waitara Station 10 minutes to Hornsby Station 14 minutes to Westfield Hornsby \$₩

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